

What I claim is:

1. A laser machining method for machining a workpiece by applying a laser beam thereto, which comprises:

5 a protective film coating step of coating a surface to be machined, of the workpiece with a protective film;

a laser beam shining step of applying a laser beam to the workpiece through said protective film; and

10 a protective film removal step of removing said protective film after completion of said laser beam shining step.

2. The laser machining method according to claim 1, wherein said protective film is formed by coating said
15 to-be-machined surface with a liquid resin and allowing the resulting coating to be hardened with the passage of time.

3. The laser machining method according to claim 2,
20 wherein said liquid resin is water-soluble.

4. The laser machining method according to claim 1, wherein said protective film is formed by sticking a sheet member to said surface to be machined.
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5. The laser machining method according to claim 4, wherein said sheet member is water-soluble.

6. The laser machining method according to claim 1,
30 wherein the workpiece is a semiconductor wafer.

7. A laser machining method for cutting a workpiece by moving the workpiece relative to a laser beam shining means while applying a laser beam to the workpiece by

said laser beam shining means, which comprises:

a protective film coating step of coating a surface to be machined, of the workpiece with a protective film;

5 a laser beam shining step of applying a laser beam to the workpiece through said protective film; and

a protective film removal step of removing said protective film after completion of said laser beam shining step.

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8. The laser machining method according to claim 7, wherein said protective film is formed by coating said to-be-machined surface with a liquid resin and allowing the resulting coating to be hardened with the passage of
15 time.

9. The laser machining method according to claim 8, wherein said liquid resin is water-soluble.

20 10. The laser machining method according to claim 7, wherein said protective film is formed by sticking a sheet member to said surface to be machined.

11. The laser machining method according to claim 10,
25 wherein said sheet member is water-soluble.

12. The laser machining method according to claim 7, wherein the workpiece is a semiconductor wafer.